

Amendment and Response under 37 C.F.R. 1.116

Applicant: Dale D. Timm et al.

Serial No.: 10/796,720

Filed: March 9, 2004

Docket No.: 200316152-1

Title: FLUID EJECTION DEVICE AND MANUFACTURING METHOD**IN THE CLAIMS**

Please cancel claims 17 and 19 without prejudice.

Please amend claims 1, 4, 18, 20, 22, and 23 as follows:

1. (Currently Amended) An ink cartridge for an ink jet printer comprising:
a substratum;
a cover attached to the substratum and having an aperture provided therein;
a printhead attached to the substratum and provided at least partially within the aperture, the printhead including a nozzle surface and having a perimeter defined by opposite ends and opposite sides extended between the opposite ends, the opposite ends and the opposite sides oriented substantially perpendicular to the nozzle surface;
at least one connector extending from one of the ends of the printhead into the aperture;
an adhesive material covering at least a portion of the at least one connector; and
at least one barrier that prevents the adhesive material from flowing along at least one of the sides of the printhead to locations away from the at least one connector,
wherein the at least one barrier contacts and extends between the cover and the at least one of the sides of the printhead.
2. (Original) The ink cartridge of claim 1, wherein the substratum has a plurality of electrical contacts provided thereon.
3. (Original) The ink cartridge of claim 2, wherein the plurality of electrical contacts provided on the substratum are provided within the aperture.
4. (Currently Amended) The ink cartridge of claim 3, wherein the printhead includes a ~~nozzle surface and~~ a plurality of contacts provided on the nozzle surface and wherein the at least one connector comprises a plurality of wires that extend between the plurality of contacts provided on the nozzle surface and the plurality of contacts provided on the substratum.

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5. (Previously Presented) The ink cartridge of claim 1, wherein the printhead is provided in the aperture such that a gap is provided between the printhead and the cover about the perimeter of the printhead and wherein the at least one barrier is provided in the gap and prevents the adhesive material from flowing along the at least one of the sides of the printhead.
6. (Original) The ink cartridge of claim 1, wherein the cover includes at least one cutout extending from the aperture and at least a portion of the at least one barrier is provided in the at least one cutout.
7. (Previously Presented) An ink cartridge for an ink jet printer comprising:
a substratum;
a cover attached to the substratum and having an aperture provided therein;
a printhead attached to the substratum and provided at least partially within the aperture;
at least one connector extending from the printhead into the aperture;
an adhesive material covering at least a portion of the at least one connector; and
at least one barrier that prevents the adhesive material from flowing to locations away from the at least one connector,
wherein the at least one barrier comprises an adhesive material.
8. (Original) The ink cartridge of claim 7, wherein the at least one barrier comprises an epoxy.
9. (Previously Presented) An ink cartridge for an ink jet printer comprising:
a substratum;
a cover attached to the substratum and having an aperture provided therein;
a printhead attached to the substratum and provided at least partially within the aperture;
at least one connector extending from the printhead into the aperture;

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an adhesive material covering at least a portion of the at least one connector; and
at least one barrier that prevents the adhesive material from flowing to locations away
from the at least one connector,

wherein the at least one barrier comprises a dam provided adjacent at least a portion
of the printhead and comprising an adhesive material.

10. (Original) The ink cartridge of claim 9, wherein at least a portion of the dam is provided in a cutout extending from the aperture.
11. (Original) The ink cartridge of claim 1, wherein the adhesive material covering at least a portion of the at least one connector comprises an epoxy.
12. (Original) The ink cartridge of claim 1, wherein the at least one barrier comprises an epoxy having a higher viscosity than the adhesive material covering at least a portion of the at least one connector.
13. (Original) The ink cartridge of claim 1, further comprising a pressure sensitive adhesive for attaching the cover to the substratum.
14. (Previously Presented) The ink cartridge of claim 16, wherein the cover has a top surface and the at least one barrier protrudes from the top surface for preventing the flow of adhesive over the cover beyond the at least one barrier.
15. (Original) The ink cartridge of claim 14, wherein the aperture provided in the cover has a side adjacent an end of the printhead and the at least one barrier acts to prevent the flow of the adhesive material over the cover beyond the at least one barrier.
16. (Previously Presented) An ink cartridge for an ink jet printer comprising:
a substratum;
a cover attached to the substratum and having an aperture provided therein;

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a printhead attached to the substratum and provided at least partially within the aperture;

at least one connector extending from the printhead into the aperture;

an adhesive material covering at least a portion of the at least one connector; and

at least one barrier that prevents the adhesive material from flowing to locations away from the at least one connector,

wherein at least a portion of the at least one barrier has a relatively rounded cross-sectional shape.

17. (Cancelled)

18. (Currently Amended) The fluid ejection cartridge of ~~claim 17~~ claim 20, wherein the substratum has a plurality of electrical contacts provided thereon, wherein each of the plurality of apertures has at least one electrical contact provided within the aperture, wherein each of the printheads includes a nozzle surface and a plurality of contacts provided on the nozzle surface, and wherein the at least one connector comprises a plurality of wires and each of the plurality of wires extend between at least one of the plurality of contacts provided on the nozzle surface and at least one of the plurality of contacts provided on the substratum.

19. (Cancelled)

20. (Currently Amended) ~~The fluid ejection cartridge of claim 19,~~ A fluid ejection cartridge for an ink jet printer comprising:

a substratum having a plurality of printheads attached thereto, each of the printheads having a perimeter defined by opposite ends and opposite sides extended between the opposite ends;

a cover attached to the substratum and having a plurality of apertures formed therein, each of the apertures configured to receive at least one of the plurality of printheads therein;

at least one connector extending from one of the ends of each of the plurality of printheads to contacts provided on the substratum;

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an adhesive material covering at least a portion of the at least one connector and filling at least a portion of each of the plurality of apertures; and

means for preventing the adhesive material from flowing along at least one of the sides of the printheads to locations away from areas near the at least one connector,

wherein the cover is attached to the substratum such that a gap exists between each of the plurality of printheads and the cover, and

wherein the means for preventing the adhesive material from flowing comprises an adhesive material forming a dam along the at least one of the sides of the printheads.

21. (Previously Presented) The fluid ejection cartridge of claim 20, wherein the cover includes a plurality of cutouts extending from each of the apertures, and wherein the adhesive material forming the dam is provided in the cutouts.

22. (Currently Amended) The fluid ejection cartridge of ~~claim 17~~ claim 20, wherein the adhesive material covering at least a portion of the at least one connector comprises an epoxy.

23. (Currently Amended) The fluid ejection cartridge of ~~claim 17~~ claim 20, wherein the cover has a top surface and the means for preventing the adhesive material from flowing prevents the flow of adhesive over the cover beyond the means for preventing the adhesive material from flowing.

24-47. (Cancelled)

48. (Previously Presented) The ink cartridge of claim 7, wherein the substratum has a plurality of electrical contacts provided thereon.

49. (Previously Presented) The ink cartridge of claim 48, wherein the plurality of electrical contacts provided on the substratum are provided within the aperture.

50. (Previously Presented) The ink cartridge of claim 49, wherein the printhead includes a nozzle surface and a plurality of contacts provided on the nozzle surface and wherein the at

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least one connector comprises a plurality of wires that extend between the plurality of contacts provided on the nozzle surface and the plurality of contacts provided on the substratum.

51. (Previously Presented) The ink cartridge of claim 7, wherein the printhead has a perimeter and is provided in the aperture such that a gap is provided between the printhead and the cover about the perimeter of the printhead and wherein the printhead has a plurality of sides and the at least one barrier prevents the adhesive material from flowing along the length of at least one of the sides of the printhead.

52. (Previously Presented) The ink cartridge of claim 7, wherein the cover includes at least one cutout extending from the aperture and at least a portion of the at least one barrier is provided in the at least one cutout.

53. (Previously Presented) The ink cartridge of claim 7, wherein the adhesive material covering at least a portion of the at least one connector comprises an epoxy.

54. (Previously Presented) The ink cartridge of claim 7, wherein the at least one barrier comprises an epoxy having a higher viscosity than the adhesive material covering at least a portion of the at least one connector.

55. (Previously Presented) The ink cartridge of claim 7, further comprising a pressure sensitive adhesive for attaching the cover to the substratum.

56. (Previously Presented) The ink cartridge of claim 9, wherein the substratum has a plurality of electrical contacts provided thereon.

57. (Previously Presented) The ink cartridge of claim 56, wherein the plurality of electrical contacts provided on the substratum are provided within the aperture.

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58. (Previously Presented) The ink cartridge of claim 57, wherein the printhead includes a nozzle surface and a plurality of contacts provided on the nozzle surface and wherein the at least one connector comprises a plurality of wires that extend between the plurality of contacts provided on the nozzle surface and the plurality of contacts provided on the substratum.

59. (Previously Presented) The ink cartridge of claim 9, wherein the printhead has a perimeter and is provided in the aperture such that a gap is provided between the printhead and the cover about the perimeter of the printhead and wherein the printhead has a plurality of sides and the at least one barrier prevents the adhesive material from flowing along the length of at least one of the sides of the printhead.

60. (Previously Presented) The ink cartridge of claim 9, wherein the cover includes at least one cutout extending from the aperture and at least a portion of the at least one barrier is provided in the at least one cutout.

61. (Previously Presented) The ink cartridge of claim 9, wherein the adhesive material covering at least a portion of the at least one connector comprises an epoxy.

62. (Previously Presented) The ink cartridge of claim 9, wherein the at least one barrier comprises an epoxy having a higher viscosity than the adhesive material covering at least a portion of the at least one connector.

63. (Previously Presented) The ink cartridge of claim 9, further comprising a pressure sensitive adhesive for attaching the cover to the substratum.